Science Data Ingest and Archive Confidence Test - SFQ01 *

Overview and scope:

The Ingest subsystem is the front end of a DAAC. It is a crucial part of the DAAC and has to ensure that all data coming into a DAAC is received and archived properly. SFQ01 is designed to test all the functions supported by the ingest subsystem with emphasis on science data and ancillary data needed to generate the higher level science products. The scope of this test is given below.

- These tests will be conducted on a DAAC-by-DAAC basis.
- The tests will be limited to the data from AM1 instruments (CERES, MODIS, ASTER, MISR and MOPITT) and ancillary data needed to generate data products.
- To the extent possible, realistic data will be used.
- Where relevant, DAAC-to-DAAC transfers of L0 and higher level products, metadata and ancillary data will be tested.

The assumptions made are:

- EDOS is fully operational and is connected to the DAAC via the EBnet. (If EDOS is not available, ETS will be the alternative source of L0 products).
- The interface tests ICT3 have verified the EDOS interfaces to concerned DAACs.
- The interface tests ICT4 have verified the NOAA ADC interfaces to concerned DAACs.
- The interface tests ICT1 have verified the SCF interfaces to concerned DAACs.
- The interface tests ICT5 have verified the ECS interfaces to concerned DAS.
- L0 data from the AM1 instruments is available (in the case of ASTER, it will be L1 data on D3 tape).

Test objective:

- Functional qualification of the INGEST subsystem (receive and archive science data, metadata, ancillary data as per requirements).

Test Configuration:

Exhibit 1 shows the overall configuration for the SFQ1 test. The exact configuration for the test at the individual DAACs will be shown in a later version of this package. For example, the test at EDC will not involve the ETS, EDOS, SDPF, FDF. The EDC DAAC will get MODIS L2 data and metadata from GSFC DAAC. The FDF itself may not figure in the test. The orbit and attitude files may be obtained from the EOC for the test at GSFC DAAC.

- Hardware and software required for ingest and archival of data at the concerned DAAC.
- EBnet interfaces to the DAAC
- Relevant hardware and software components at EDOS/ETS, NOAA ADC, SDPF, SCF

Note: The NOAA interface to the GSFC DAAC is via the Data Link Server located at GSFC DAAC. The ancillary data coming from NOAA will flow through this server.

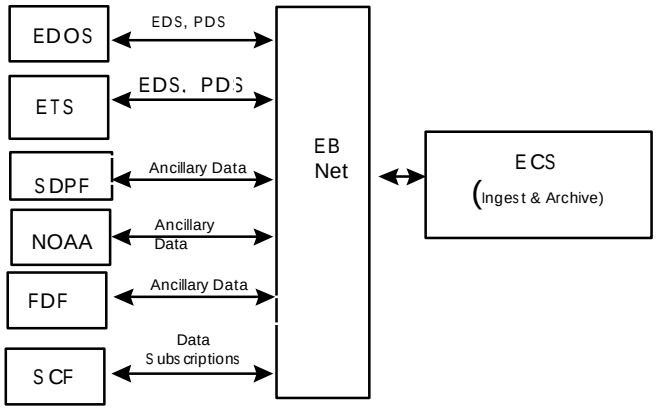

Exhibit 1

Overview of the functional threads:

The tests are organized on the basis of the nature of the data and/or the source of the data. The threads, with associated requirements(F&PRS) are,

1. Ingest and archiving of Production Data Sets and Expedited Data Sets from EDOS/ETS.
2. Ingest of ancillary data (orbit and attitude) from EOC (GSFC).
3. Ingest and archiving of ancillary data from NCEP NMC via the GDAAC Data Link Server (Polling with delivery record).
4. Ingest and archiving of ancillary data from NCDC at the GSFC DAAC (Polling without delivery record).
5. Ingest and archiving of ancillary data from NESDIS at the LaRC DAAC (Polling without delivery record).
6. Ingest and archive MODIS level 2 data from GSFC DAAC at EDC and NSIDC DAACs .
7. Ingest and archiving of metadata from GSFC DAAC at EDC and NSIDC DAACs after doing quality checks . (Req # DADS 290, DADS 300, DADS 310, DADS 320).
8. Notification of ingest of data requested in standing orders (other than L0 products).
9. Ingest and archival of data from tapes (D3 tape from EDOS and ASTER).

SFQ01.1 Functional Thread Test Case: Level 0 data ingest at GSFC/LaRC DAAC

Description: Ingest and archival of Production Data Sets and ingest of Expedited Data Sets from EDOS.[1]

Objective: To verify that EDS/PDS files from EDOS are stored in the archive.

Success Criteria: The data sets in the archive should have the same filenames, file sizes described in the product delivery record.[2]

Configuration: EDOS (relevant hardware and software), DAAC (relevant hardware and software), test support personnel at both ends. This test will be conducted at GSFC and LaRC separately.

Data sets Used: EDS/PDS (MODIS, MOPITT, CERES, MISR), and ancillary data.

[1] *EDSs will not be archived at GSFC DAAC but made available to the SCFs.*
[2] *Multiple granule files should all be properly archived..*

Test Steps:

1. Check connectivity and readiness at DAAC and EDOS.
2. Ensure that the ingest software is active.
3. Initiate transfer of a few Production Data Sets/ Expedited data sets (single granule as well as multiple granules) at the EDOS end.
4. Monitor the ingest history log and verify names and sizes of files ingested after the arrival of the PDR.
5. Verify that an acknowledgment message was sent by DAAC to EDOS.
6. In the case of expedited data sets, send the files to the concerned SCFs and request a QA report.[3]
7. Examine the QA report to determine if ingest was proper.

[3] *The steps 6 and 7 have been introduced at the request of GSFC DAAC since GSFC DAAC will not archive the EDSs and cannot do a QA check.*

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	GSFC DAAC	Login as DAAC operator by entering username and password.	Login is successful.			
1.002	GSFC DAAC	Verify network connectivity and readiness between The DAAC and EDOS.	Connectivity established.			
2.001	GSFC DAAC	Login to the Ingest Client workstation using the following steps/ **rlogin <hostname>** **<password>**	Login is successful.			
2.003	GSFC DAAC	Open an xterm window and use this xterm window to start an EDOS Client xterm using the following steps/commands: **xterm -n "EDOS Client" &**	The EDOS Client xterm is successfully started.			
2.004	GSFC DAAC	Open an xterm window and use this xterm window to start an Ingest Client using the following steps/commands: **xterm -n "Ingest Client" &**	The Ingest Client xterm is successfully started.			
2.005	GSFC DAAC	Open an xterm window and use this xterm window to start an Ingest GUI xterm using the following steps/commands: **xterm -n "Ingest GUI" &**	The Ingest GUI xterm is successfully started.			
2.006	GSFC DAAC	Open an xterm window and use this xterm window to start a Data Server xterm using the following steps/commands: **xterm -n "Data Server" &**	The Data Server xterm is successfully started.			
2.007	GSFC DAAC	Identify the Science Data Server that is to receive the MODIS Level 0 data.	The designated Science Data Server is identified.			
2.008	GSFC DAAC	On the Ingest GUI xterm, start the INGEST GUI using the following steps/commands: **cd /usr/ecs/<mode>/CUSTOM/bin/INS** **EcInRunGUI**	The INGEST GUI is successfully started.			
2.009	GSFC DAAC	On the INGEST GUI, select the "Operator Tools" function.	The "Operator Tools" function is selected.			
2.010	GSFC DAAC	On the INGEST GUI, perform the following steps/commands: enter **EDOS** as the External Data Provider set the priority to **L0** click the **OK** button	"EDOS" is entered as the External Data Provider and the priority is set to "L0".			
2.011	GSFC DAAC	On the INGEST GUI select the "Monitor/Control" function.	The "Monitor/Control" function is selected.			

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.012	GSFC DAAC	On the INGEST GUI, perform the following steps/commands: select **Search By: Data Provider** enter **EDOS** select **Text View**	The "Data Provider" option has been selected and **EDOS** has been entered as input data. The "Text View" option has been selected.			
2.013	GSFC DAAC	On the Data Server xterm, login to the Science Data Server workstation identified in step #130 above, using the following steps/commands: **rlogin <hostname>** **<password>**	Login is successful.			
2.014	GSFC DAAC	On the Ingest Client xterm, start the EDOS Ingest Polling process using the following step/command: **EcInRunPolling EDOS**	The EDOS Ingest Polling process is started.			
2.015	GSFC DAAC	On the EDOS Client xterm, login to the simulated EDOS Client Host using the following steps/commands: **rlogin <hostname>** **<password>**	Login is successful.			
2.016	GSFC DAAC	Periodically polls directory on open server for presence of an MODIS PDR or EDR.	No detection of an MODIS PDR or EDR.			
2.017	GSFC DAAC	On the EDOS Client xterm, ftp the MODIS Level 0 data files to the polling directory location at the GSFC ECS DAAC.	The MODIS Level 0 data files are ftp'd to the polling directory location at the GSFC ECS DAAC.			
2.018	GSFC DAAC	On the EDOS Client xterm, ftp the PDR containing the MODIS Level 0 Production Data Sets (PDSs) into the polling location at the GSFC ECS DAAC.	The PDR containing the MODIS Level 0 PDSs is ftp'd to the polling location at the GSFC ECS DAAC.			
2.019	GSFC DAAC	On the EDOS Client xterm, ftp the EDR (Expedited Delivery Record) containing the MODIS Level 0 Expedited Data Sets (EDSs) into the polling location at the GSFC ECS DAAC.	The EDR containing the MODIS Level 0 EDSs is ftp'd to the polling location at the GSFC ECS DAAC.			
2.020	GSFC DAAC	On the EDOS Client xterm, ftp the Signal Files associated with the "ftp'd" PDRs and EDRs into the polling location at the GSFC ECS DAAC.	The Signal Files associated with the PDRs and EDRs are ftp'd to the polling location at the GSFC ECS DAAC.			

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.021	GSFC DAAC	DAAC Ingest/Distribution Technician: Invokes the Ingest History Viewing GUI.	The History Log GUI allows technician to view the previous days activities, check for receipt of expected data, and generate a standard daily report on the previous day's Ingest activity.			
2.022	GSFC DAAC	Polls directory on open server for presence of MODIS Level 0 Signal File.	Detects the MODIS Level 0 Signal File in the specified directory.			
2.023	GSFC DAAC	Polls directory on open server for presence of MODIS Level 0 PDRs and EDRs.	Detects the MODIS Level 0 PDRs and EDRs in the specified directory.			
2.024	GSFC DAAC	Receives the MODIS Level 0 PDR and EDR file information and begins PDR validation process.	The MODIS Level 0 PDR and EDR are validated.			
2.025	GSFC DAAC	Performs an FTP "get" to retrieve the PDSs and EDSs.	The PDSs and EDSs are retrieved from the specified directory location.			
2.026	GSFC DAAC	While monitoring the INGEST GUI, verify that the screen indicates that the Ingest Request is 100% complete.	The PDR, EDR, PDSs, and EDSs have been successfully ingested.			
2.027	GSFC DAAC	Periodically review the Ingest Status Monitor display.	The system automatically logs events by means of the MSS Event Logging capability.			
2.028	GSFC DAAC	Sends a Product Acceptance Notification (PAN) and Expedited Acceptance Notification (EAN) to EDOS indicating successful transfer of data.	EDOS receives the PAN and EAN from the GSFC ECS DAAC.			
2.029	GSFC DAAC	On the EDOS Client xterm, confirm receipt of the PAN and EAN.	The PAN and EAN are received.			
2.030	GSFC DAAC	Automatically extracts the metadata from transferred MODIS Level 0 PDSs and EDSs to perform validation checks (e.g., range checks).	Selected parameters from the extracted metadata are checked to verify the consistency and correctness of the data and metadata.			
2.031	GSFC DAAC	View the MSS Event Log to verify successful ingest and preprocessing of the data.	The MSS Event Log displays that successful ingest and preprocessing has occurred.			
2.032	GSFC DAAC	Download the Ingest History Log and reviews the log to verify that the ingested PDRs, EDRs, PDSs and EDSs have been recorded.	The system generates the Ingest History Log that is reviewed by the DAAC Ingest/Distribution Technician.			

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.033	GSFC DAAC	DSS sends a Data Check Status notice to the DAAC Archive Manager, DAAC Ingest/Distribution Technician, and EDOS.	The DAAC Archive Manager, DAAC Ingest/Distribution Technician, and EDOS receive Data Check Status notices concerning the MODIS Level 0 PDSs and EDSs.			
2.034	GSFC DAAC	On the EDOS Client xterm, confirm receipt of the Data Check Status notice.	The Data Check Status notice is received.			
2.035	GSFC DAAC	Automatically determines the existence of subscriptions pending receipt of the MODIS Level 0 PDSs and EDSs.	All existing subscriptions are collected.			
2.036	GSFC DAAC	View the summary information concerning the completed ingest requests via the GUI Ingest History Log tool.	The system displays the Ingest History Log which contains summary information on the following: Priority, Data Provider, Start Time, End Time, Completion Status, Restart Flag, Pre-Processing Time, Transfer Time, Archive Time, Number of Files, Number of Granules, Number of Successful Granules, Data Volume, and Ingest Type.			
2.037	GSFC DAAC	Access the Ingest Summary Report GUI Screen and selects the “Ingest Data Summary Report” and options. Generate and review the summary report.	The system generates the summary reports detailing the completed ingest requests, including completion status, data volume ingested, etc.			
2.038	GSFC DAAC	Invoke the DSS System Management Tool and accesses the Storage Management screen. Examine the progress of a particular insert request on the screen by selecting the “Log and Reports (MSS)” option from the screen.	The DSS System Management Tool is accessed and the Storage Management screen is displayed. The “Log and Reports (MSS)” option is selected and the log files are displayed on the screen.			
2.039	GSFC DAAC	Receive a data insert request validation message on the screen.	The Processing subsystem sends a Data Insert Request to the Science Data Server. Receipt of the request is logged and a request identifier is associated with the Data Insert Request.			

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.040	GSFC DAAC	Continue to receive and review status concerning the data insert requests. Access the Data Server System Management screen and selects the "Requests" option.	The queued Data Insert Request is reached and processing begins. Associated data granules and metadata are transferred from the Processing Subsystems to the Data Server working storage. Data transfer status (including recoverable errors) are indicated in the event log (via MSS Logging Services). Validation success is logged (via MSS Logging Services) with the associated Data Insert Request Identifier and the appropriate status message is returned to the Processing Subsystem.			
2.041	GSFC DAAC	Access the Archive Activity screen and select the "Archive Activity Log" option to view information concerning the archive activities of the data insert request.	The Archive Activity Log displays each data product being stored and storage status of each storage operation.			
2.042	GSFC DAAC	Continue to examine the progress of the data insert request by selecting the "Log and Reports (MSS)" option from the Storage Management screen.	Science Data Server receives and logs the Data Storage Request status message from Storage Management. The additional metadata items are validated. The status of the metadata load is entered in the event log (via MSS Logging Services).			
2.043	GSFC DAAC	DSS sends a Storage Status notice to the DAAC Archive Manager, DAAC Ingest/Distribution Technician, and EDOS.	The DAAC Archive Manager, DAAC Ingest/Distribution Technician, and EDOS receive Storage Status notices concerning the PDSs and EDSs.			
2.044	GSFC DAAC	On the EDOS Client xterm, confirm receipt of the Data Archive Status notice.	The Data Archive Status notice is received.			
2.045	GSFC DAAC	GSFC ECS DAAC: Sends a PAN and EAN to EDOS indicating successful archive of the PDSs and EDSs.	EDOS receives the PAN and EAN from the GSFC ECS DAAC.			
2.046	GSFC DAAC	On the EDOS Client xterm, confirm receipt of the PAN.	The PAN is received.			
2.047	GSFC DAAC	On the Data Server xterm, obtain a directory listing of the archive directory.	The archive directory listing indicates that the CPF data files were successfully archived.			

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.048	GSFC DAAC	Review the progress on subscription processing by accessing the Subscription Server Main Window Screen and selecting the "Subscriptions" option to view subscription submitted for the data.	The SBSRV examines the event list for all subscriptions for that event. Subscription notifications are sent to the tester.			
2.049	GSFC DAAC	Receive a prompt indicating the arrival of new email.	Tester downloads the email message containing the subscription information.			
2.050	GSFC DAAC	Perform a query of the GSFC ECS DAAC inventory by entering a pre-selected "date and time of storage" value.	The queried MODIS Level 0 inventory metadata corresponding to the "date and time of storage" value are located in the GSFC ECS DAAC inventory and displayed on the screen.			
2.051	GSFC DAAC	Perform a query of the GSFC ECS DAAC inventory by entering a pre-selected "physical location" value.	The queried MODIS Level 0 inventory metadata corresponding to the "physical location" value are located in the GSFC ECS DAAC inventory and displayed on the screen.			
2.052	GSFC DAAC	Perform a query of the GSFC ECS DAAC inventory by entering a pre-selected "unique format identifier" value.	The queried MODIS Level 0 inventory metadata corresponding to the "unique format identifier" value are located in the GSFC ECS DAAC inventory and displayed on the screen.			
2.053	GSFC DAAC	Perform a query of the GSFC ECS DAAC inventory by entering a pre-selected "data check status" value.	The queried MODIS Level 0 inventory metadata corresponding to the "data check status" value are located in the GSFC ECS DAAC inventory and displayed on the screen.			
2.054	GSFC DAAC	On the Data Server xterm, query the appropriate Science Data Server Inventory database.	The queries return matching information pertaining to the archived MODIS Level 0 metadata.			
2.055	GSFC DAAC	Access the Search and Order Tool to do a query for the MODIS Level 0 data files.	The MODIS Level 0 data files are located in the inventory as a single entity of logically grouped sets of data.			
2.056	GSFC DAAC	Access the GSFC ECS DAAC's inventory to perform a query that displays the unique data set id associated with the MODIS Level 0 data and metadata.	The queried unique data set ids are displayed on the screen.			
2.057	GSFC DAAC	On the Data Server xterm, compare all ingested and archived files to the original files prior to ingest and archive using the UNIX binary differences command (bdiff).	The results of all "bdiff" comparisons indicate no differences.			

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.058	GSFC DAAC	On the Ingest Client xterm, display the MSS Event Log.	The MSS Event Log displays the detailed entries for ingested CPF data files.			
3.001	GSFC DAAC	Exit the EDOS Client xterm.	The EDOS Client xterm is exited.			
3.002	GSFC DAAC	Exit the Data Server xterm.	The Data Server xterm is exited.			
3.003	GSFC DAAC	Shutdown the Ingest GUI	The Ingest GUI is shutdown.			
3.004	GSFC DAAC	Exit the Ingest GUI xterm.	The Ingest GUI xterm is exited.			
3.005	GSFC DAAC	Shutdown the EDOS polling process.	The EDOS polling process is shutdown.			
3.006	GSFC DAAC	Exit the Ingest Client xterm.	The Ingest Client xterm is exited.			
3.007	GSFC DAAC	Logs off the Ingest Client workstation.	Log off procedures are completed.			

SFQ01.2 Functional Thread Test Case: Orbit and attitude data ingest

Description: Ingest and archival of ancillary data sets (orbit and attitude) from EOC. (The EOC receives orbit and attitude data from the FDF. This test will be conducted only at the GSFC DAAC using FTP transfers)

Objective: To verify that ancillary data (orbit and attitude) files from EOC are stored in the archive.

Success Criteria: The data sets in the archive should have the same filenames, file sizes described in the product delivery record.

Configuration: EOC (relevant hardware and software), DAAC (relevant hardware and software), test support personnel at both ends. This test will be conducted at the GSFC DAAC .

Data sets Used: MODIS orbit and attitude data (simulated?)

Test Steps:

1. Check connectivity and readiness at DAAC and EOC.
2. Ensure that the ingest software is active.
3. Initiate transfer of a few orbit and attitude Data Sets at the EOC end.
4. Monitor the ingest history log and verify names and sizes of files ingested after the arrival of the PDR.
5. Verify that an acknowledgment message was sent by DAAC to EOC.

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
2.001	TBD					

SFQ01.3 Functional Thread Test Case: NOAA (NECP NMC) Ancillary data ingest at GSFC DAAC

Description: Ingest and archival of ancillary data from NCEP and TOMS at the GSFC DAAC. The ancillary data from NCEP and Code 916 are routed through the GDAAC data link server located at the GSFC DAAC. For the purposes of this test data files previously obtained from the above-mentioned sources will be stored on the GDAAC data link server and transfer initiated from the data link server. The figure (extracted from the ECS-GSFC DAAC ICD) below shows the Ancillary data flows at the GSFC DAAC

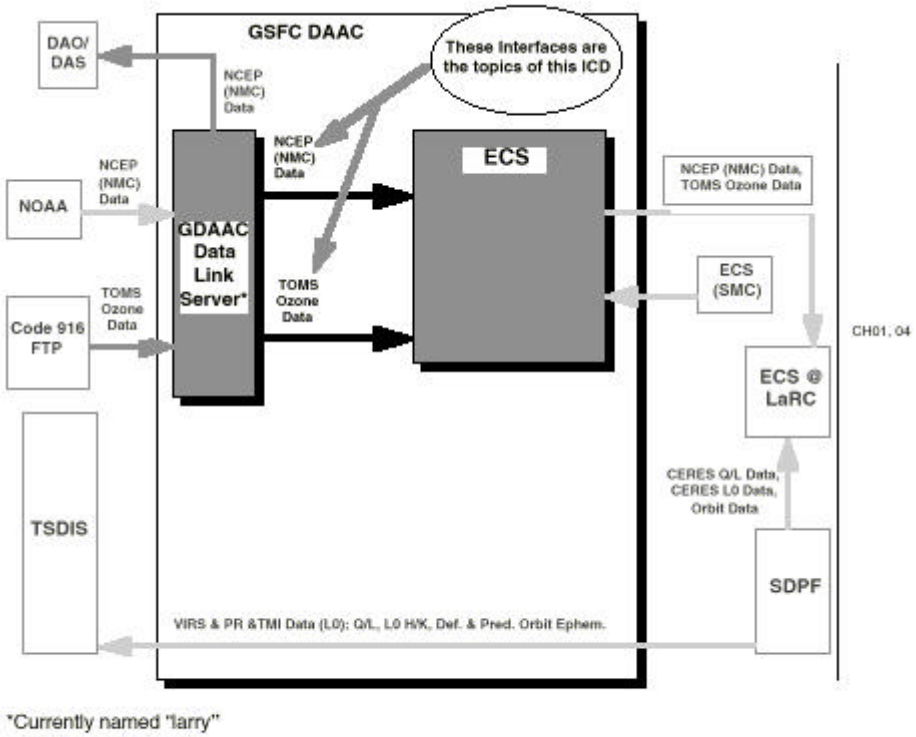

Figure 3-1. Interfaces to ECS at GSFC DAAC-Context Diagram

Objective: To verify that the ancillary data files from GDAAC data link server are ingested and stored in the archive.

Success Criteria: The data sets in the archive should have the same filenames and file sizes described in the product delivery record sent by the GDAAC data link server.

Configuration: GDAAC data link server (hardware and software), Ingest server and software, Data server subsystem, Storage management at GSFC , , test support personnel at both ends.

Data sets Used: NCEP and TOMS data. Details of the data are given in Appendix -B.

Test Steps:

1. Check connectivity and readiness of the data link server, GSFC DAAC .
2. Ensure that the ingest software is active.
3. Initiate transfer of data files at the GDAAC data link server.
4. Monitor the ingest history log and verify names and sizes of files ingested after the arrival of the PDR.

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
3.001	TBD					

SFQ01.4 Functional Thread Test Case: NCDC Ancillary data (global raingauge data) ingest at GSFC DAAC

Description: Ingest and archival of ancillary data from NCDC at the GSFC DAAC. The ancillary data is acquired by the method of polling without delivery record. ECS will initiate polling of a predetermined directory on the NESDIS SAA Data Delivery server and look for any newly staged global raingauge data files. (For the purposes of the test we will use only those files staged on the day of the test.) These files are then acquired via an FTP get command into the ingest server and subsequently ingested into the data server.

Objective: To verify that the ancillary data files from NCDC are stored in the archive.

Success Criteria: The data sets in the archive should have the same filenames, file sizes as seen on the staging directory in the NCDC Data Delivery server.

Configuration: NCDC Data delivery server (IP address: ftp.ncdc.noaa.gov), Ingest hardware and software, Data server hardware and software, storage management hardware and software, test support personnel at both ends. This test will be conducted at the LaRC DAAC.

Data sets Used: Ancillary data (global raingauge data files- I01-01YYYY.asc, I01-02YYYY.asc, I01-03YYYY.asc, I01-04YYYY.asc, I01-05YYYY.asc, I01-06YYYY.asc, I01-07YYYY.asc, I01-08YYYY.asc, I01-09YYYY.asc, I01-10YYYY.asc, I01-11YYYY.asc, I01-12YYYY.asc) relevant to CERES product generation.

Test Steps:

1. Check connectivity with NCDC Data Delivery Server (Ping IP address ftp.ncdc.noaa.gov), and readiness of the LaRC DAAC???? / or GSFC DAAC???.
2. Ensure that the ingest software is active.
3. Log into the NESDIS data delivery server and view the source directory (/pub/data/gpcp/gpcc).
4. Transfer the ancillary data files to the ingest server via an FTP get command.
5. Submit insert requests for the data files transferred in step 4.
6. Monitor the ingest history log and verify names and sizes of files ingested after the arrival of the PDR.

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
4.001	TBD					

SFQ01.5 Functional Thread Test Case: NESDIS Ancillary data (vegetation index) ingest at LaRC DAAC

Description: Ingest and archival of ancillary data from NESDIS at the LaRC DAAC. The ancillary data is acquired by the method of polling without delivery record. ECS will initiate polling of a predetermined directory on the NESDIS SAA Data Delivery server and look for any newly staged vegetation index files. (For the purposes of the test we will use only those files staged on the day of the test.) These files are then acquired via an FTP get command into the ingest server and subsequently ingested into the data server.

Objective: To verify that the ancillary data files from NESDIS SAA are stored in the archive.

Success Criteria: The data sets in the archive should have the same filenames, file sizes as seen on the staging directory in the NESDIS SAA Data Delivery server.

Configuration: NESDIS SAA Data delivery server (IP address: 140.90.208.201), Ingest hardware and software, Data server hardware and software, storage management hardware and software, test support personnel at both ends. This test will be conducted at the LaRC DAAC.

Data sets Used: Ancillary data (vegetation index files- T96126C1, T96126C2, T96126C4, T96126C5, T96126QC, T96126V1) relevant to CERES product generation.

Test Steps:

1. Check connectivity with NESDIS SAA Data Delivery Server (Ping IP address 140.90.208.201), and readiness of the LaRC DAAC.
2. Ensure that the ingest software is active.
3. Log into the NESDIS data delivery server and view the source directory (TBS).
4. Transfer the ancillary data files to the ingest server via an FTP get command.
5. Submit insert requests for the data files transferred in step 4.
6. Monitor the ingest history log and verify names and sizes of files ingested after the arrival of the PDR.

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
5.001	TBD					

SFQ01.6 Functional Thread Test Case: NESDIS Ancillary data (Aerosol Weekly) ingest at LaRC DAAC

Description: Ingest and archival of ancillary data from NESDIS at the LaRC DAAC. The ancillary data is acquired by the method of polling without delivery record. ECS will initiate polling of a predetermined directory on the NESDIS SAA Data Delivery server and look for any newly staged aerosol weekly files. (For the purposes of the test we will use only those files staged on the day of the test.) These files are then acquired via an FTP get command into the ingest server and subsequently ingested into the data server.

Objective: To verify that the ancillary data files from NESDIS SAA are stored in the archive.

Success Criteria: The data sets in the archive should have the same filenames, file sizes as seen on the staging directory in the NESDIS SAA Data Delivery server.

Configuration: NESDIS SAA Data delivery server (IP address: 140.90.208.201), Ingest hardware and software, Data server hardware and software, storage management hardware and software, test support personnel at both ends. This test will be conducted at the LaRC DAAC.

Data sets Used: Ancillary data (Aerosol Weekly 100km Analyzed field file- NSS.PSATAVST.SST.TSTkm100) relevant to CERES product generation.

Test Steps:

1. Check connectivity with NESDIS SAA Data Delivery Server (Ping IP address 140.90.208.201), and readiness of the LaRC DAAC.
2. Ensure that the ingest software is active.
3. Log into the NESDIS data delivery server and view the source directory (TBS).
4. Transfer the ancillary data file to the ingest server via an FTP get command.
5. Submit insert request for the data file transferred in step 4.
6. Monitor the ingest history log and verify names and sizes of files ingested after the arrival of the PDR.

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
6.001	TBD					

SFQ01.7 Functional Thread Test Case: NESDIS Ancillary data (Snow/Ice cover) ingest at LaRC DAAC

Description: Ingest and archival of ancillary data from NESDIS at the LaRC DAAC. The ancillary data is acquired by the method of polling without delivery record. ECS will initiate polling of a predetermined directory on the NESDIS SAA Data Delivery server and look for any newly staged snow/ice cover files. (For the purposes of the test we will use only those files staged on the day of the test.) These files are then acquired via an FTP get command into the ingest server and subsequently ingested into the data server.

Objective: To verify that the ancillary data files from NESDIS SAA are stored in the archive.

Success Criteria: The data sets in the archive should have the same filenames, file sizes as seen on the staging directory in the NESDIS SAA Data Delivery server.

Configuration: NESDIS SAA Data delivery server (IP address 140.90.208.201), Ingest hardware and software, Data server hardware and software, storage management hardware and software, test support personnel at both ends. This test will be conducted at the LaRC DAAC.

Data sets Used: Ancillary data (snow/ice cover files- COM.SPPROD.F10EDRSH, COM.SPPROD.F10EDRNH, COM.SPPROD.F13EDRSH, COM.SPPROD.F13EDRNH) relevant to CERES product generation.

Test Steps:

1. Check connectivity with NESDIS SAA Data Delivery Server(Ping IP address 140.90.208.201), and readiness of the LaRC DAAC.
2. Ensure that the ingest software is active.
3. Log into the NESDIS data delivery server and view the source directory(TBS).
4. Transfer the ancillary data files to the ingest server via an FTP get command.
5. Submit insert requests for the data files transferred in step 4.
6. Monitor the ingest history log and verify names and sizes of files ingested after the arrival of the PDR.

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
7.001	TBD					

SFQ01.8 Functional Thread Test Case: NESDIS Ancillary data (layer/level ozone) ingest at LaRC DAAC

Description: Ingest and archival of ancillary data from NESDIS at the LaRC DAAC. The ancillary data is acquired by the method of polling without delivery record. ECS will initiate polling of a predetermined directory on the NESDIS SAA Data Delivery server and look for any newly staged layer/level ozone files. (For the purposes of the test we will use only those files staged on the day of the test.) These files are then acquired via an FTP get command into the ingest server and subsequently ingested into the data server.

Objective: To verify that the ancillary data files from NESDIS SAA are stored in the archive.

Success Criteria: The data sets in the archive should have the same filenames, file sizes as seen on the staging directory in the NESDIS SAA Data Delivery server.

Configuration: NESDIS SAA Data delivery server (IP address 140.90.208.201), Ingest hardware and software, Data server hardware and software, storage management hardware and software, test support personnel at both ends. This test will be conducted at the LaRC DAAC.

Data sets Used: Ancillary data (Aerosol Weekly 100km Analyzed field file- PRD.OZONE.MPM1OP, PRD.OZONE.MPM3OP) relevant to CERES product generation.

Test Steps:

1. Check connectivity with NESDIS SAA Data Delivery Server(Ping IP address 140.90.208.201), and readiness of the LaRC DAAC.
2. Ensure that the ingest software is active.
3. Log into the NESDIS data delivery server and view the source directory(TBS).
4. Transfer the ancillary data file to the ingest server via an FTP get command.
5. Submit insert request for the data file transferred in step 4.
6. Monitor the ingest history log and verify names and sizes of files ingested after the arrival of the PDR.

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
8.001	TBD					

SFQ01.9 Functional Thread Test Case: NESDIS Ancillary data (total ozone concentration) ingest at NSIDC DAAC

Description: Ingest and archival of ancillary data from NESDIS at the NSIDC DAAC. The ancillary data is acquired by the method of polling without delivery record. ECS will initiate polling of a predetermined directory on the NESDIS SAA Data Delivery server and look for any newly staged total ozone concentration files. (For the purposes of the test we will use only those files staged on the day of the test.) These files are then acquired via an FTP get command into the ingest server and subsequently ingested into the data server.

Objective: To verify that the ancillary data files from NESDIS SAA are stored in the archive.

Success Criteria: The data sets in the archive should have the same filenames, file sizes as seen on the staging directory in the NESDIS SAA Data Delivery server.

Configuration: NESDIS SAA Data delivery server (IP address 140.90.208.201), Ingest hardware and software, Data server hardware and software, storage management hardware and software, test support personnel at both ends. This test will be conducted at the NSIDC DAAC.

Data sets Used: Ancillary data (Total Ozone concentration- NSS.PSAT.TOVS.DSD3S1, NSS.PSAT.TOVS.DSD3S2) relevant to CERES product generation.

Test Steps:

1. Check connectivity with NESDIS SAA Data Delivery Server(Ping IP address 140.90.208.201), and readiness of the LaRC DAAC.
2. Ensure that the ingest software is active.
3. Log into the NESDIS data delivery server and view the source directory(TBS).
4. Transfer the ancillary data files to the ingest server via an FTP get command.
5. Submit insert request for the data files transferred in step 4.
6. Monitor the ingest history log and verify names and sizes of files ingested after the arrival of the PDR.

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
9.001	TBD					

SFQ01.10 Functional Thread Test Case: MODIS Level 2 data ingest at EDC and NSIDC DAACs

Description: Ingest and archive MODIS Level 2 products from GSFC DAAC.

Objective: To verify that the Level 2 data files from GSFC DAAC are stored in the EDC and NSIDC archive. The tests will be conducted separately or simultaneously at the two centers. An FTP transfer mechanism will be used for the test. (In the real operations, this will be a subscription push from the GSFC DAAC as the products are generated). IfEBnet links are not available, this will be only a media ingest test.

Success Criteria: The data sets in the archive should have the same filenames, file sizes described in the product delivery record.

Configuration: GSFC DAAC (relevant hardware and software), EDC (NSIDC) DAACs (relevant hardware and software), test support personnel at both ends. This test will be conducted at the EDC (NSIDC) DAAC. Tape drive at the EDC (NSIDC) DAAC for media ingest.

Data sets Used: MODIS L2 products generated at the GSFC DAAC.

Test Steps:

1. Check connectivity and readiness at GSFC DAAC and EDC (NSIDC) DAAC.
2. Ensure that the ingest software is active.
3. Initiate transfer of a few L2 data sets at the GSFC DAAC end (During operations, this will be a “subscription push” from GSFC as L2 data is generated . The subscription push test will be included in SFQ2 and EGS10 tests).
4. Monitor the ingest history log and verify names and sizes of files ingested after the arrival of the PDR.

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
10.001	TBD					

SFQ01.11 Functional Thread Test Case: Ingest metadata after quality checks [4]

Description: Ingest and archive metadata after quality checks.

Objective: To verify that the metadata files are checked for quality before they are stored in the archive.

Success Criteria: The data sets in the archive should have the same filenames, file sizes described in the product delivery record.

Configuration: GSFC DAAC (relevant hardware and software), EDC (NSIDC) DAAC (relevant hardware and software), test support personnel at both ends. This test will be conducted at the EDC (NSIDC) DAAC.

Data sets Used: TBD.

Test Steps:

1. Check connectivity and readiness at GSFC DAAC and EDC DAAC.
2. Ensure that the ingest software is active.
3. Initiate transfer of a few metadata sets at the GSFC DAAC end. .
4. Monitor the ingest history log and verify names and sizes of files ingested after the arrival of the PDR.

[4] *This test case can be combined with the previous one.*

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
1.001	SCF	Enter Subscription for QA Notification and for distribution of MODIS Data.				
1.002	SCF	Registers a "QA Notification Subscription" to the GSFC DAAC via email message. (This QA notification underlines the conditions when to notify the SCF that a specified set of events has occurred.)	The GSFC DAAC receives the "QA Notification Subscription" from the SCF.			
1.003	SCF	Register a distribution request subscription to the GSFC DAAC via email message. (This QA notification underlines the conditions when to notify the SCF that a specified set of events has occurred.)	The GSFC DAAC receives the distribution request subscription from the SCF.			
		Start of DAAC QA Update				
2.001	SCF	Invoke the QA Monitor GUI.	The QA Monitor GUI is invoked.			
2.002	SCF	Update QA Metadata via the QA Monitor GUI; select **datatype.**	The datatype is highlighted.			
2.003	SCF	Enter the date to search on: Begin date-10/01/1990; End date-10/01/1999	Date are entered.			
2.004	SCF	Click on **"Query".**	The QA Monitor sends a query to the Science Data Server for the metadata for that datatype. Several granules will be returned matching the query parameters.			
2.005	SCF	Highlight the **<metadata name>** data granule.	The granule is highlighted.			
2.006	SCF	Select the **Update** button.	The metadata update window is displayed.			
2.007	SCF	Select the **<metadata field name>** line.	The line is highlighted.			
2.008	SCF	Select the **oper** metadata field.	The metadata field is highlighted.			
2.009	SCF	Change the value of this flag to **<flag name**>.	The metadata value is updated in the GUI.			
2.010	SCF	Update the explanation field.	The explanation field is updated.			
2.011	SCF	Select the **scf Quality** metadata field.	The metadata field is highlighted.			
2.012	SCF	Change the value of this flag to <flag name>.	The metadata value is updated in the GUI.			
2.013	SCF	Update the explanation field.	The explanation field is updated.			
2.014	SCF	Store the updated metadata to SDSRV by selecting the **OK** button.	The updated metadata is stored back to the SDSRV.			
2.015	SCF	Close the QA Monitor GUI.	The GUI is closed.			
2.016	SCF	Invoke the QA Monitor GUI again.	The QA Monitor is displayed.			
2.017	SCF	Enter the date to search on: Begin date-10/01/1990; End date-10/01/1999	Date are entered.			
2.018	SCF	Click on **"Query".**	The QA Monitor sends a query to the Science Data Server for the metadata for that datatype. Several granules will be returned matching the query parameters.			
2.019	SCF	Highlight the <metadata name> data granule.	The granule is highlighted.			

2.020	SCF	Inspect the values for the **oper** and the **scfQA** flags and for the associated explanation fields.	The values reflect the updates which were just made.			
2.021	SCF	Close the QA Monitor GUI.	The GUI is closed.			
2.022		**End of QA Update**				
2.023	SCF	Upon completion of the QA, quality assurance flags are generated and sent to the DAAC. In some cases the metadata will need to be updated. If this is necessary, the SCF updates the metadata and sends the updates to the DAAC for storage into the archive.	GSFC DAAC data archive is updated with the validated data.			
		Generate 8 mm Tape				
2.024	GSFC DAAC	DAAC Operator: Load 8mm tape upon request.	Tape is loaded.			
2.025	GSFC DAAC	DAAC Operator: Click on the Distribution Request icon from the DSS GUI.	The state of the request is listed as **Active**			
2.026	GSFC DAAC	DAAC Operator: Click on the **refresh** button to verify the request is completed and ready for shipment.	: State changed to **Waiting for Shipment**.			
2.027	GSFC DAAC	DAAC Operator: Select **Tracking** icon and click **Mark Shipped** button to manually change the state of the distribution request. Click on the **Refresh** button	State changed to **Shipped**.			
2.028	GSFC DAAC	DAAC Operator: Send email message containing information about request.	Email received by SCF.			
2.029	GSFC DAAC	DAAC Operator: Verify that the packing list and media label were generated.	Items were generated.			

SFQ01.12 Functional Thread Test Case: Notification to interested users in response to their standing orders.

Description: Response to standing orders.

Objective: To verify that the users who placed standing orders for some products are notified automatically when these are archived after production.

Success Criteria: The users who placed a standing order subscription get a notification when the products are stored in the archive.

Configuration: GSFC DAAC (relevant hardware and software), test support personnel, subscription service. This test will be conducted at the GSFC DAAC.

Data sets Used: MODIS L0 used to generate L1 at the GSFC DAAC, standing order subscription placed for the L1 data product from a user terminal.

Test Steps: (TBD)

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
12.001	TBD					

SFQ01.13 Functional Thread Test Case: Ingest of data from tape

Description: Ingest and archival of data from tapes. This test will be done at all the four DAACs

Objective: To verify that algorithm packages and data from tapes are stored in the archive (For example, D3 tapes from ASTER GDS at EDC).

Success Criteria: The data sets or algorithm packages in the archive should have the same filenames, file sizes described in the product delivery record.

Configuration: Tape drives and driver software, DAAC (relevant hardware and software), test support personnel.

Data sets Used: ASTER D3 tapes, ISCCP Level 1B Data from GOES-West at LaRC, ISCCP Level 1B Data from GOES-East at LaRC, algorithm packages from SCFs or instrument teams (and any other relevant data tapes).

Test Steps:

1. Check readiness of ingest hardware and software at the DAAC.
2. Check readiness of the tape device that is configured.
3. Ensure that the media ingest software is active.
4. Initiate transfer of files from tapes.
5. Monitor the ingest history log and verify names and sizes of files ingested.

Step ID	Station	Actions	Results	Comments	Verified Reqs.	Last Modified
13.001	TBD					

Notes:

1. The Ingest Fault Detection case does not feature in this package because it is basically a system management issue.
2. The requirements (F&PRS) will be mapped to the test threads.
3. The data sets to be used will be identified ASAP.
4. The data flow diagrams for the individual DAACs will be added to the package soon.
5. The QA checks on data ingested will probably be done by the concerned SCF. Data will be sent to the concerned SCF for this purpose. This will be included in the tests.

Appendix -A : Requirements

Req ID	Requirement Text	Test Case	Status
DADS1450#B	Each DADS shall be capable of screening its archive holdings of Level 1A or Level 0 data, and if a product(s) is found to be lost or unreadable, generate a request for a replacement product from EDOS, dispatch the request, and ingest the replacement product. Applies to AM-1 spacecraft data archived at LaRC and GSFC. Detection of missing archive holdings occurs only when an attempt is made to retrieve data in response to a Data Request. The request for a replacement product is performed by the operations staff.		
DADS0130#B	Each DADS shall receive from the EDOS, at a minimum, the following: a. Production data (L0) b. Expedited data **Acceptance Criteria:** The GSFC ECS DAAC must receive production (Level 0) and expedited data from EDOS. The DAAC Ingest/Distribution Technician verifies that the MODIS Level 0 and expedited data is recorded in the Ingest History Log.		
DADS0250#B	Each DADS shall receive, at a minimum, data in the following forms: a. Physical electronic media b. Electronic communications network c. Hardcopy media **Acceptance Criteria:** The GSFC ECS DAAC must have the capability to receive the Level 0 data from EDOS via an electronic communications network (polling). **Comment(s):** This test procedure does not cover references to sub-letters (a or c). Sub-letter (c) is a Release B1 capability.		
DADS0290#B	Each DADS shall check all metadata and data it receives. For each type of data described by the metadata, the data shall be checked for the presence of required fields, error-free input, correctness of the data set granule size, and other checks as required. **Acceptance Criteria:** The system must perform consistency and correctness checks for the MODIS data and metadata.		
DADS0300#B	Each DADS shall generate status information indicating the success or failure of metadata and data consistency checks. **Acceptance Criteria:** The GSFC ECS DAAC must generate status indicating the success of metadata and data consistency checks. The DAAC Ingest/Distribution Technician verifies that EDOS receives a data check status notice indicating success of metadata and data consistency checks. **Comment(s):** Reference to “failure of metadata and data consistency checks” is not covered in this test procedure.		
DADS0310#B	Each DADS shall verify that data received came from an approved/authorized source. **Acceptance Criteria:** The INGST CI must verify that EDOS is an authorized provider of data to be ingested at the GSFC ECS DAAC.		
DADS0350#B	Each DADS shall generate the following metadata items, at a minimum: a. Unique Granule Id for L0 b. Date and time of storage c. Physical location d. Data check status e. Unique format identifiers **Acceptance Criteria:** The STMGT CI must store the following metadata: unique granule Id for L0, date and time of storage, physical location, data check status, and unique format identifiers. The DAAC Ingest/Distribution Technician verifies that the metadata items have been generated by querying the inventory database.		
DADS0370#B	Each DADS shall provide the IMS with metadata on newly stored data granules. **Acceptance Criteria:** The system must store Granule Inventory Metadata into the Metadata database. The DAAC Ingest/Distribution Technician verifies the ability to query the system for the newly archived MODIS Level 0 data.		
DADS0440#B	Each DADS shall provide storage, at a minimum, for the following EOS data: a. Standard Products b. Associated correlative data sets c. Associated ancillary data sets d. Associated calibration data sets e. Associated metadata f. Documents		

Req ID	Requirement Text	Test Case	Status
	g. Algorithms h. Format descriptions (e.g., HDF spec.) **Acceptance Criteria:** The GSFC ECS DAAC must provide storage for the MODIS Level 0data. The SDSRV CI must interface with the STMGT CI to provide storage for MODIS standard products; associated ancillary, calibration, and correlative data sets; associated metadata; and algorithms. The DAAC Ingest/Distribution Technician verifies that upon completion of storage, the system sends a storage status notice to EDOS. **Comment(s):** This test procedure does not cover reference to sub-letters (f or h). Sub-letters (f and h) are Release B1 capabilities.		
DADS1070#B	The DADS shall send data check and storage status to the provider of ingest data. **Acceptance Criteria:** The DAAC Ingest/Distribution Technician verifies that the GSFC ECS DAAC sends data check and storage status notices to EDOS regarding the ingested MODIS Level 0 data.		
DADS1080#B	Each DADS shall maintain a data receipt log. **Acceptance Criteria:** The DAAC Ingest/Distribution Technician verifies that the Ingest History Log is updated with information contained within the Product Delivery Record (PDR) sent by EDOS with the MODIS Level 0 data.		
DADS1100#B	Each DADS shall maintain a log of all updates to the local inventory. The log shall be used to generate status reports and, in conjunction with the inventory backup, recreate the local inventory in the event of catastrophic failure. **Acceptance Criteria:** The GSFC ECS DAAC operations staff (i.e., DAAC Ingest/Distribution Technician) must be able to select and extract Inventory Logs for selected time periods. The STMGT CI must record each archived data item in the Inventory Update Log.		
DADS1380#B	Each DADS shall monitor data transfer between external (non-ECS) elements and the DADS. **Acceptance Criteria:** The INGST CI must provide authorized operations staff the capability to view the status of ongoing ingest processing. The DAAC Ingest/Distribution must have the capability to view the following information: External Data Provider, ingest Request Identifier, total ingest data volume, and Request State.		
DADS1510#B	**Verification Method:** demonstration. Each DADS shall insure that IMS acknowledges receipt of metadata on all products stored in the DADS. **Acceptance Criteria:** The SDSRV CI must notify the requesting client that a Data Insert Request has completed successfully once the storage of the associated MODIS Level 0 data and metadata has been confirmed.		
DADS1780#B	Each DADS shall provide the capability to store as a single entity logically grouped sets of data. **Acceptance Criteria:** The system must maintain Collection Metadata for the MODIS Level 0 data. The DAAC Ingest/Distribution Technician verifies the ability to query the GSFC ECS DAAC's inventory and perform a search for the metadata associated with the MODIS Level 0 data.		
DADS1795#B	Each DADS shall update internal file directories with the unique Data set ID. **Acceptance Criteria:** The DAAC Ingest/Distribution Technician performs a query of the GSFC ECS DAAC's inventory to verify that the archived MODIS Level 0 data and metadata are stored with unique Data set IDs.		
DADS1800#B	Each DADS shall maintain data storage inventories defining the physical location of files. **Acceptance Criteria:** The STMGT CI must be capable of tracking the physical location of each data granule via use of the File Directory. The DAAC Ingest/Distribution Technician performs a search of the GSFC ECS DAAC's File Directory for the MODIS Level 0 data.		
DADS1805#B	The DADS shall provide an inventory system capable, at a minimum, of the following: a. Accepting the number of new inventory entries, one per granule, for the number of granules per day as specified in Appendix C. b. Uniquely identifying each data granule. c. Tracking the physical location of each data granule. **Acceptance Criteria:** The STMGT CI must maintain a unique data set id for each data item in the GSFC ECS DAAC's File Directory. The DAAC Ingest/Distribution Technician reviews the Inventory Update Log and verifies that there is a unique granule data set id for each MODIS Level 0 data type archived at the EDC ECS DAAC. **Comment(s):** This test procedure does not cover sub-letter "a". Sub-letter "a" is covered in the End-To-End Scenario Group.		
DADS2024#B	Each DADS shall insure that data sent by EDOS and SDPF has been received and validated. **Acceptance Criteria:** The GSFC ECS DAAC must ensure that the MODIS Level 0 data is received from the EDOS. The DAAC Ingest/Distribution Technician verifies that the MODIS Level 0 is recorded in the Ingest History Log. **Comment(s):** Reference to "SDPF" is not covered in this test procedure. "SDPF" is not a Release B.0 or B.1 external interface.		
EDOS-4.1.3.1#B	EDOS shall interface with the GSFC DAAC to transfer Mission Data, Operations Management Data, Mission Test Data, and Operations Management Test Data.		

Req ID	Requirement Text	Test Case	Status
	Acceptance Criteria: The DAAC Ingest/Distribution Technician verifies that the Mission Data, Operations Management Data, Mission Test Data, and Operations Management Test Data files are recorded in the Ingest History Log.		
EDOS-4.1.3.2#B	EDOS shall interface with the GSFC DAAC to receive Operations Management Data, and Operations Management Test Data. **Acceptance Criteria:** The DAAC Ingest/Distribution Technician verifies that the Operations Management Data and Operations Management Test Data files are recorded in the Ingest History Log.		
EDOS-4.1.3.3#B	EDOS shall provide the capability to transfer PDS Delivery Records as specified in Applicable Document 1 to the GSFC DAAC following the delivery of each PDS. **Acceptance Criteria:** The DAAC Ingest/Distribution Technician verifies that PDS Delivery Records are sent by EDOS and recorded in the Ingest History Log.		
EDOS-4.1.3.8#B	EDOS shall provide the capability to receive Operations Management data as specified in Applicable Document 1 from the GSFC DAAC including: a. Reserved b. PDS/EDS Acceptance Notifications c. Reserved d. Service Requests **Acceptance Criteria:** The GSFC ECS DAAC must send PDS/EDS Acceptance Notifications to EDOS. The DAAC Ingest/Distribution Technician verifies that acceptance notifications are sent to EDOS indicating receipt of the MODIS PDS/EDS data sets. **Comment(s):** This test procedure does not cover reference to sub-letter (d). According to the "requirement interpretation" text (ECS 071697), 'Item d is applicable with EDOS SU #1 which is not supported in release b'.		
EDOS-4.1.3.11#B	EDOS shall provide the capability to ship archived PDSs on removable physical media to the GSFC DAAC upon request. **Acceptance Criteria:** The DAAC Ingest/Distribution Technician verifies the ability to request PDSs from EDOS on removable physical media. The DAAC Ingest/Distribution Technician verifies the receipt and ability to mount the physical media for ingest into the GSFC ECS DAAC.		
EDOS-4.1.3.13#B	EDOS shall provide the capability to store DEDS received from the GSFC DAAC. **Acceptance Criteria:** The GSFC ECS DAAC must send DAAC to EDOS Data Sets (DEDS) to EDOS.		
EDOS-4.1.3.14#B	EDOS shall provide the capability to transfer EDS Delivery Records as specified in Applicable Document 1 to the GSFC DAAC following the delivery of each EDS. **Acceptance Criteria:** The DAAC Ingest/Distribution Technician verifies that EDS Delivery Records are sent by EDOS and recorded in the Ingest History Log.		
EDOS-4.6.1.9#B	EDOS shall transfer PDSs using FTP. **Acceptance Criteria:** The DAAC Ingest/Distribution Technician verifies that the MODIS PDSs are transferred using FTP.		
EDOS-4.6.1.10#B	EDOS shall transfer EDSs using FTP. **Acceptance Criteria:** The DAAC Ingest/Distribution Technician verifies that the MODIS EDSs are transferred using FTP.		
EDOS-4.6.1.11#B	EDOS shall transfer PDS Physical Media Unit Delivery Records using FTP. **Acceptance Criteria:** The DAAC Ingest/Distribution Technician verifies that the PDS Physical Media Unit Delivery Records are transferred using FTP.		
IMS-0300#B	The IMS shall maintain a log of all information update activity. **Acceptance Criteria:** The ADSRV CI must maintain a log of all information update activity. The DAAC Ingest/Distribution Technician reviews the Event Log to verify that update information activity concerning the newly archived MODIS Level 0 data is recorded in the log.		
IMS-0450#B	The IMS shall accept and validate new and updated metadata for all ECS archive data which has been ingested at the DADS.		
IMS-0890#B	The IMS shall provide the capability to receive the metadata from the DADS when ADC or ODC data has been ingested into the ECS archives. ODCs will not be supported (information will not be sent to or received from ODCs) for Release B.0. Ancillary data from the ADC, to store in archive		
IMS-0910#B	The IMS shall provide the capability to receive the metadata from the DADS, when IP data has been ingested into the EOSDIS archives. B: ASTER GDS interfaces to EDC DAAC only		

Req ID	Requirement Text	Test Case	Status
SDPS0020#B	**Verification Method:** test. **Requirement Text:** The SDPS shall receive EOS science, engineering, ancillary, and expedited data from the EDOS, the IPs, and non-EOS data, in situ data, associated algorithms, documentation, correlative data, and ancillary data (as listed in Appendix C) from ADCs, EPDSs, and ODCs. **Acceptance Criteria:** The GSFC ECS DAAC must receive data from the EDOS. The DAAC Ingest/Distribution Technician verifies that the ingested MODIS Level 0 data is recorded in the Ingest History Log. **Comment(s):** This test procedure does not cover references to “IPs”, “ADCs”, “EPDSs”, or “ODCs”.		

Appendix - B : Ancillary data interfaces at the GSFC DAAC

(Extracted from the ECS - GSFC DAAC ICD)

A summary of the interfaces between ECS and the GSFC DAAC is provided in Table 3-1, and this table identifies the source, destination, interface message, data, and transfer mechanism. CH04

Table 3-1. ECS to GSFC DAAC Data Link Server Interfaces CH01

Source	Destination	Interface Message	Data	Transfer Mechanism	
					CH01
GDAAC Data Link Server	ECS	Product Delivery Record	N/A	ftp	CH01, 04
ECS	GDAAC Data Link Server	Product Delivery Record Discrepancy	N/A	e-mail (see Note 1)	CH01, 04
ECS	GDAAC Data Link Server	Production Acceptance Notification	N/A	e-mail	
(Deleted)					CH01, 04
GDAAC Data Link Server	ECS	N/A	NCEP 1-Degree Medium Range Forecast System-Forecast at 00Z (MRF)	ftp	CH01, 04
GDAAC Data Link Server	ECS	N/A	NCEP Surface Flux Data	ftp	CH01, 04
GDAAC Data Link Server	ECS	N/A	NCEP T62 Spectral Coefficients (Sigma Product)	ftp	CH01, 04
GDAAC Data Link Server	ECS	N/A	NCEP 1 - Degree Global Data Assimilation Model (GDAS) Product	ftp	CH04
(Deleted)					CH01, 04
(Deleted)					CH01, 04
(Deleted)					CH01, 04
(Deleted)					CH01, 04
(Deleted)					CH01, 04
(Deleted)					CH02
(Deleted)					CH02
GDAAC Data Link Server	ECS	N/A	EP/TOMS Data	ftp	CH02, 04
GDAAC Data Link Server	ECS	N/A	ADEOS/TOMS Data	ftp	CH01, 04
(Deleted)					CH01, 04
					CH04

					CH04
(Deleted)					CH04
(Deleted)					CH04
(Deleted)					CH04
GDAAC Data Link Server	ECS	N/A	NCEP Ship/Buoy Observations (Locations)	ftp	CH01, 04
GDAAC Data Link Server	ECS	N/A	NCEP Reynolds Blended SST Weekly Product	ftp	CH04
GDAAC Data Link Server	ECS	N/A	NCEP 1-Degree Aviation Model (AVN) Product	ftp	CH04
(Deleted)					CH04

Note 1: This e-mail message is used only in the event of an error in the product delivery record.